

*Jennifer Stock:* You're listening to Ocean Currents, a podcast brought to you by NOAA's Cordell Bank National Marine Sanctuary. This radio program was originally broadcast on KWMR in Point Reyes Station, California. Thanks for listening!

(Musical Intro)

*Jennifer Stock:* Welcome to another addition of Ocean Currents, I'm your host, Jennifer Stock. On this show we talk with scientists, educators, explorers, policy makers, ocean enthusiasts, adventurers, advocates, and more, all uncovering and learning about the mysterious and vital part of our planet, the blue ocean.

I bring this show to you monthly on KWMR from NOAA's Cordell Bank National Marine Sanctuary, one of four National Marine Sanctuaries in California, all working to protect unique and biologically diverse ecosystems.

I'm talking with author Liz Cunningham today, about her upcoming book, Ocean Country, due to be published in early 2015. And then later on we'll be hearing about what's going on out in the ocean, across the Cordell Bank and Gulf of the Farallones sanctuaries off the coast of Point Reyes, Jaime Jahnke from Point Blue Conservation Science is going to give us a call, he was just out doing some oceans surveys, and we'll hear some updates about the ocean from him. So, stay tuned I hope you'll stay for the entire hour.

So today we're talking with Liz, and I'd like to give you a bit of background explaining the back-story to this book, because the ocean, which Liz loved, almost killed her. After a drowning accident left her paralyzed, Liz looked for a place of recovery; she found that place, the ocean. She was saddened to discover that the waters she's come to love were in danger. Her upcoming book, Ocean Country, is the story of her search to understand our mysterious bond with the seas, how crucial they are to our survival, and what can be done to preserve them. From the Mediterranean to Sulawesi, and West Papua to the Turks and Caicos Islands, to her home here on the California Coast, Liz searched for answers, through interviews with conservationists, fishermen, and

scientists, and witnessing, firsthand, the state of the underwater world. Ocean Country follows a startling journey filled with revelations and relations with people hard at work to stem the tide of destruction and the capacity each of us has to contribute to the healing our world. Liz Cunningham grew up outside New York City, and received a BA in ecology from the University of the Atlantic. She is the author of Talking Politics: Choosing The President In The Television Age. From Praeger Publishing. A series of oral history interviews with top television journalists, such as Tom Brokaw, Larry King, and Robin McNeil. Her writing has appeared in Earth Island Journal, Times of the Islands, The San Francisco Chronicle, and the Marin Poetry Center Anthology. And she lives with her husband, Charlie Costello, in Berkeley, California, with her dog, Zack. Liz, welcome to Ocean Currents.

*Liz Cunningham:* Great to be here with ya, Jenny.

*Jennifer Stock:* Welcome back to Point Reyes, how are you today?

*Liz Cunningham:* I'm great. I had a nice drive out today.

*Jennifer Stock:* That's great, it's wonderful weather out today. Let's go back to the presidential politics thing threw me when I met and learned about your writing. So, tell us; how did you go from writing about politics to writing about the ocean?

*Liz Cunningham:* Well, it's a long story. My first book came out in 1995, and then I started doing radio commentary, and just over a year after that book came out, well... I like to go out in the surf, just by Bolinas actually, and surf in a white water kayak, and one day I was out there and the waves were really nice, and all of a sudden I felt something, it felt strange, and I looked back, and it was a rogue wave that had picked up the stern of my kayak, and I'll say, quite honestly, it just flipped me like a toothpick. The next thing I knew I came to under water, I'm in a white water kayak, so you have a skirt that's holding you in the kayak, and so my head was facing the bottom of the ocean.

And I was well trained, you know what you do then is you do is reach you hands up to pull the skirt, there's a little tab, and then

you get yourself out of the kayak...well, I couldn't move my arms. And I remember it was just this tremendous shock, in my head I was screaming, "Come on! Come on! Come on!" And you know, Elisabeth Kübler-Ross has documented these stages, but boy, when you experience them first hand it's quite different. And I remember I was in denial, and bargaining, and all this begging, and then suddenly I realized, "I'm dying." And I went away, I went in to sort of a dream world, and then to make a long story short, I had a conversation with a relative, which people often do, and suddenly, though the conversation, I said, "I want to do this, I want to get back and try this again."

And it was like someone threw on a strobe in a stadium. All of a sudden my eyes were open and I was back in what felt like a washing machine, and I felt this intense tingling in my hands, and the blood had returned to my hands. And I'll tell ya, thank God the tab on the skirt was yellow because I could actually see it in all that blue. And I pulled it, and popped out of the kayak, and because I had a life preserver, which I would have died without, all of a sudden I was at the surface just wheezing like an asthmatic. And there I was, just coughing, wheezing, and just barely able to get a breath. And then I put my hands to my face and thought, "oh my God, I can put my hands to my face!"

*Jennifer Stock:* And this launched you forward into learning more about the ocean?

*Liz Cunningham:* Yes! I mean, it was a little complicated, you know I had always loved the ocean. When I was seventeen we went on an outward-bound course and for two weeks we were on the gulf of Florida, but I really thought of the ocean as pleasurable and profound recreation, I was very dismissive of it. And this love affair I had with the ocean, it's almost like suddenly there was a crisis, and either the ocean and I were going to break up, and that was all over, or we had to take it to a different level.

And I remember about a year after going out to the beach and putting one toe in the water, and it just sent ripples up my spine, I was like, "Oh no. Un-uh. Not that" And I was sitting out there for a while, playing fetch with my dog, it was at Stinson beach, and

finally I realized and I almost think my dog helped me see it, that, “Ok, you need to get back in the water.” And so then I took a long time getting over that fear, which was so bone deep and visceral.

*Jennifer Stock:* God, I can’t imagine.

*Liz Cunningham:* Yeah, it was really like Lucile Ball learning synchronized swimming, I meant the degree to which I was nervous about getting in to the water was just, you know I would get into the water a little and then I would get back out! (Laughs) But then through that process I gradually got under water, scuba diving, and it was like a love affair where you’ve had a break up, and you get back together and now you see it clearer then ever, and I was like, “Oh my God, I love this so much! I wanna do something for this.” And that’s really when the discovery process started, when I started to say, “what could I do, what could I do with my skills?” And then I started to learn more about ocean conservation.

*Jennifer Stock:* So Ocean Country is the name of the book and you actually started out with a poem about it and it takes the reader into your origins on the east coast to the west coast, and I love the analogy of the west coast being the ocean country... can you read the poem for us?

*Liz Cunningham:* Sure, also, just to preface this just a little bit, I grew up just outside of New York City, and in habit of mind and temperament, in the quantity of coffee I drink every day I am truly a New Yorker. And there is this very famous New Yorker cartoon that was on the cover, in which you see New York City, and you see that grid of New York City, and there is the rest of the world, it’s really like a punctuation point; New York is the World. And I moved to California when I was 22, and at the time I remember thinking, “I’m moving to this state that’s kind of shaped like a caterpillar.” And I thought, “This is Ocean Country.” And I think this whole process of the book is saying, “Un-uh, the whole world is Ocean Country.” Because we’re so dependent on water, but I actually wrote this poem before the kayak accident, and it’s very funny to me I actually read it to my husband last night, he was ironing his shirt and I asked, can I read and practice?” And he said, “Sure.” And I was telling him, “It’s funny, I think the whole essence of the book is in the poem that I wrote almost 20 years ago, and which

actually appeared in the Marin Poetry Center Journal. So the title of the poem is Ocean Country,

It's the last gasp at the edge  
It's the first breath of light  
The place where the continent comes to a screeching halt  
West, and west, and west  
Here's where it ends  
Here's here it begins  
Blue and brown and white,  
Thick with wind and rain and salt  
The ultimate end zone,  
Clapping its can do cadence in each wave,  
Begin and end, and begin again.  
Dense fog, coarse sand, and soft crashing ringing in your ear  
It's a dog tearing up the length of a beach  
Heart beating, mind racing, a blistering gait,  
Ocean country, last gasp at the edge,  
First breadth of light.

*Jennifer Stock:*

That's so beautiful the way you read that. It's funny because you let me read some excerpts prior, and just how you read that is exactly how I read the book, with your voice and your enthusiasm, it's so much a story being told. It's almost like reading fiction and non-fiction at the same time, and it really brought me in. So, thank you for sharing that.

That's how I feel here on the west coast, we are really on the edge here, especially with the San Andreas Fault, kinda right where we are right now, we're really on this interesting zone at the edge, just a very emotional place in some ways, and the landscape takes it there too.

You went to a couple different places, you went to Indonesia, and the Turks and Caicos, and the Mediterranean—what brought you to each of these places, what were you hoping to gain from them for the planning of your book? Or were they places you were going before the book was even a plan?

*Liz Cunningham:* Well the place that was a real catalyst, other than here, was the Caicos and Turks islands And I will say that I think the real structure of this book was to go on walk-about. I really felt and acute longing for the ocean, and that there was really a lot of mystery around that, and I wanted to explore the role of the ocean in my life, and our collective lives, and do it in a way that the structure of it allow me to really zigzag and be flexible and so I really wanted to along on a walk-about, and so that said I didn't really have an exact plan. And my husband, I will say he's like my best editor and my best guide, and so you know I decided, "You know what? I'm not going to query a publisher, I'm just going to go on walk-about and I am just going to write, and my compass needle is going to be truth. And the tone of the book and the shape of the book will come into definition through that."

But that being said, I basically thought, "How can I encompass the globe?" How could I do that? And there are lots of books out there, and your going to here, and then your going to go there, and then you go here, and you know, 50 Wonderful Places to Visit, and I said, "OK, can I think of four contrasting places, where there is really a lot of tooth in the contrast?" And so I had already been shuttling back and forth between here and the Turks and Caicos islands, and so that was a very good contrast because the Caribbean is very much filled with developing countries, highly impacted by tourism, and I felt a very special bond with the Turks and Caicos islands, here we have a coast which is really a very healthy ocean compared to others, and a very active environmental community. You know, I was saying, "So, can I find two other places?" And you know? It was really a snap, because the Mediterranean is really the most damaged, most industrialized ocean in the world, and it was the seat of commerce throughout history. So, OK, that one would be good to work on. And what would be a great contrast to that? I felt like a developing world would be really good. And so the choral triangle which encompasses Philippines, Middle East, Malaysia, Papua, Sulawesi, that are is now considered the heart of the ocean, and really it is the center of marine biodiversity, and it is also subjected to some of the greatest environmental stresses now.

And along with that I was very interested in visiting the indigenous people, who really call the ocean home.

*Jennifer Stock:* And they make their living from it, they are completely entwined with the ocean in those areas.

*Liz Cunningham:* Yeah, and you know in the Choral Triangle are 120 million people who eat daily from the ocean, or have a livelihood that is dependant upon the ocean. And so, 120 million? That's a third of the population in the United States.

*Jennifer Stock:* Right. Let's get into the Turks and the Caicos, I got to read the excerpts and you just describe it so beautifully, I've never been there but you just describe it so beautifully that I've made a painting in my head based on your writing and the stories that you've told. And on one of your last trips you had a completely devastating discovery and you write about that.

*Liz Cunningham:* Yeah.

*Jennifer Stock:* You have an excerpt from that, and I'm wondering if you wouldn't mind reading. Tell us about your process getting to it.

*Liz Cunningham:* Yeah, certainly. I think one of the things that happened originally, I started to realize very clearly how much I loved the ocean. And I thought, "Well, let's see if I can't dig into this." And so I decided to go there, and that was in 2008 actually. And I really didn't know what I was going to do, but I said, "Take pencil to tip of paper. Spend time in the ocean and see what comes of that." And out of that came a desire to do more writing work, and I started going back and interviewing environmentalists there, and getting more involved in conservation issues there, and published an article, and then I had the idea to do this book, and a year ago last June I said, "OK we can go back again one more time for this book and we're going to get under water." And really my goal was to do some follow up interviews and then spend some time in the beauty of those reefs, really try to write about those reefs and try to communicate to the reader the incredible beauty that exists there, and also this tremendous abundance of life, which really supports a lot of the islanders there, because the islanders, as in the Choral

triangle, are really dependant on their reefs for their livelihood. So I went back, and I am just whistling Dixie, and I had spent quite a bit of time at different sites, so there were a number of dove sites there that I knew so well I could just dive in at night and go, "On no, it's over here." And in half-dark, like you're walking around in your house at night. You know, if you get up to go to the bathroom. I knew those sites so well, and...

*Jennifer Stock:* I'm so familiar with that idea, having lived in Catalina for two years, and knowing exactly where the... corn shark should be.

*Liz Cunningham:* Exactly! So you feel like you know these sites. So to preface this section I'm going to read. There was a site called Boneyard and we had been there the week before, and I just loved this site, and so I got on the boat that morning and they said, "We're going to Boneyard." And I was like (Big excited breath), "Ohhh, great!" And it was a gorgeous day and I went and sat up on the deck. And in those islands there's this extraordinary turquoise water, and you know, I would say I was just licking my chops to get in there, and I was so happy and so excited to be there. So here, I'll go ahead and read this excerpt:

*"It was had sometimes to even see the choral, because the schools of fish were so thick, and those schools were punctuated by hundreds of parrotfish in all kinds of colors- maroon and turquoise, magenta and yellow and blue, colors so brilliant and brave it was as if Picasso had painted them.*

*And there were Damselfish and Hamlets, Grouper, and Trumpet fish, not to mention a turtle, and a herd of spotted rays, or a shark swimming through. As we motored out, I remembered thinking that the waters of Grace Bay and the point, they were the most deeply alive place I had ever experienced.*

*The boat slowed. One of the dive masters used a long pole to moor us to a buoy.*

*'OK kiddoe,' he said, "get in the water.'*



*I put the heel of my hand on my mask to keep it in place and took one long step off the back of the boat, and into that world I so deeply cherished.*

*I exhaled, closed my eyes, and sank into the water for a second or two, just to feel the water river along my body. 'Warm.' I mused. I looked at my dive computer, it read 82 degrees Fahrenheit. I looked down at the site below, which was now down about 40 feet below, 'Where am I?' I thought. What I saw was almost unrecognizable. The sand channels were there, but there was hardly a sign of life. 'This, this can't be.' I thought. Everywhere I turned the coral was white and brown, with algae growing over it. There were a few small clusters of fish, and an occasional lone fish looking out of place. The coral had bleached, I paused at a head of Staghorn coral, the week before it had been filled with some many half-inch juvenile parrotfish and blue **chromis** that the water had appeared to be filled with blue and white snow, tiny brown damselfish and bright little conies had peered out at me from the shelter of the coral maze like structure, Small fish had darted furtively, and mischievously, sometimes chasing each other, or nibbling off a piece of coral, now the coral was barren, save one single blue tang that nibbled on the algae undergrowth. We kept swimming, searching for a spot that might not be so damaged, 'How many miles did this stretch on for?' I asked myself.*

*As I moved my fin, slowly, through the dense water, it felt as if I swam through the ashen remnants of a bombed out cathedral."*

*Jennifer Stock:* It's a huge pivotal moment for you in this process of enjoying and exploring the Turks and Caicos. So, where did you go after that with your thoughts about these places and what to do next?

*Liz Cunningham:* Well, right away I was in a state of disbelief, and right after that it really brought everything to a new level, because I had read about coral bleaching, and I had read all these statistics about what was happening, and if you had asked me that morning, "Do you understand what's happening to the ocean?" I would have said, "Sure, you bet." And if you had asked me in the afternoon of I would have said, "No, I did not understand." So it brought it to an entirely different level, and I remember going out that night and

thinking, “Oh my god, how could we screw up a body of water that large?” Because I knew that this was because of climate change, and also because of pollution going into the water. And it’s a funny thing, because a day or two before I would have told you, “I get this.” But I got it at a whole new level, in a way I started to realize how connected things were, and that the water was a part of the earth and that it was like one large body that was suffering, and what was creating that suffering—and I suddenly realized—it was us. It was human kind, and that just pummeled me. And I remember that night, I had a journal, and as I went to sleep I couldn’t even write in the journal.

*Jennifer Stock:* How did other divers react on the boat, and did the dive masters know? I guess s/he been there previously.

*Liz Cunningham:* Really I was quite shocked, because I was not with a scientific team, and it was really, I would say, a kind of numbness, and I would say also ignorance, and certainly in the past I’ve seen that in other places. And so I think that people went, “Oh, something is a little off today.” And I really, in that moment, I really didn’t want to tell people, I think that they thought, “The vis (sic. visual) is bad, where are the fish? Something funny is going on.” So they really didn’t see it, and I think that it’s a very sad thing, around the world, that people are not identifying what’s going on, because it’s really like moving through a city where people are ailing of ill, and saying, “Well, this is alright, this is how things are.” So I think it’s a very sad commentary on people who get to interface with the public about the ocean. But I will say that immediately afterwards, you know, it did happen even that day, I said, “Get to work.” And started taking video footage. And then I had a chance to visit with some scientists, some friends of mine, so two days later we looked at all the footage, and what they explained to me was that that reef, while I experienced it as beautiful, it had been under stress for decades from pollution and from temperature changes, and we had had a 3 degree spike in one week and that spike did not cause the choral bleaching, it’s more like you had a struggling body of water, and that spike in temperature was the last straw.

*Jennifer Stock:* We are seeing that more around the world, the stress compounding and these last straws becoming more frequent. That must have

been so hard. And one of the things you write is that these problems are so massive and so in need of international coordination, and paralysis is often the reaction, which I resonate with, it's so true. And so then you write What's Needed? And where did you want to go with that?

*Liz Cunningham:* Yeah, you know, I think there're two great fallacies in the world, and the process of writing this book has steeped me in both of them. The first fallacy I think we hear a lot, and what's amazing to me is we hear it from people who we think are very well educated and very sophisticated, and that fallacy is that while we have an enormous number of environmental challenges, which may actually make each other worse, that it may not really need to worry about it, because in the long run they're manageable. We're going to manage them. And it's sort of a patronizing tone, it's really, "Don't worry, we'll work these things out." You know, we'll have some chronic problems but they'll be manageable. And that to me is really false, because one of the things I saw, while traveling through the world, is... very often when you read you have X problem, and Y amount of time, and that makes for the future Z equal time of disaster, and that's a lot of environmental news that I consume. Well, when I started traveling around the world what I realized is it's not happening in the future, it's happening now, and who's affected? People. So for me, that's one of the big issues, is that it's happening now, and it's happening to real people, I mean, you're almost brought to tears, when you have villagers who eat fish three times a day what whatever extra fish they sell to get money for whatever they need, and they are just helplessly waving at a large body of water and saying, "For generations we ate from this bay, there's no fish now. So we have to buy petrol to go a bit further to get littler fish." And that's a humanitarian crisis, and I think that that's happening now, and it's not manageable, it's not being managed well. But that gets me to the second fallacy.

The second fallacy is one that I struggled with and it's one that I ha in my head, and it's that individual people cannot make a difference. For a long time I had a metaphor that really expressed how I felt about environmental problems, And jumping into this field after having covered politics, basically it felt like I have

arrived at major league baseball, and I get up to bat, and the ball is coming in at 100 miles per hour, and I'm ready to swing, and I'm holding a tooth pick in my hand. And that's how overwhelming it feels, and I realized that's a false metaphor, and Pete Seeger, actually, provides a metaphor that I see as being very important to being an advocate in the world for a certain issue, and he likens it to a see-saw. And you've got a see-saw with a fulcrum, and on one end there's a big bucket of rocks, and you're at the other end, and you've got these big companies, you've got corruption, you've got governments that are not responsive, you've got people who are numb, who are unaware, and he said on the other side of that see-saw is a bucket, and you've got a teaspoon in your hand, and you're going to put a teaspoon of sand in that bucket, and that sounds funny, but what he's implying is that eventually that bucket is going to tip. And I think the process of writing this book has changed me, I no longer feel like I am holding a tooth pick, because every day I write, or do a radio interview, I start to fill up that bucket, and you can step back and say, the bucket will never fill, but if you look at the major movements in history, if you look at the end of slavery, or if you look at democratization, that all happened with teaspoons and a bucket, it was multiples of people insisting, again and again and again. All those victories, those were not the victories of a few people; they were the victory of people coming together.

*Jennifer Stock:* That's a great way to look at it as the multiple. I got a little nervous there, and I got a little nervous there when you said, "I'm an individual and I can't change it."

*Liz Cunningham:* (Laughs deeply)

*Jennifer Stock:* It's interesting as a communicator, or an educator, it's something we struggle with a lot—what to ask of people? And realizing that these actions are connected to each other. It has to change; we have to change our actions now. It's not just one people doing that; it's 10 people and so on.

*Liz Cunningham:* Yeah.

*Jennifer Stock:* And I like your analogies to these major pieces in history when people have made change, we can, there is a way to do it. This is a wonderful piece to take a short little break on.

For folks tuning in, this is Liz Cunningham with me here in the studio, we are taking about and reading passages from her upcoming book *Ocean Country*, and my name is Jennifer Stock, you're listening to *Ocean Currents* on KWMR, 90.5 Point Reyes Station, and 89.9 Bolinas, we're going to take a short music break and we'll be back in just a minute.

(Musical interlude)

*Jennifer Stock:* You're tuned to *Ocean Currents*, on KWMR, and I have Liz Cunningham in the studio with me, an author talking about her upcoming book *Ocean Country*, and Liz first I want to thank you from bringing in this music you got permission to use by David Darling, it's beautiful.

*Liz Cunningham:* Yeah, I am very thankful, it's funny. He's a Grammy winning musician and after I came back from seeing the choral bleaching I wrote him this long, long very passionate email, "May I use your music?" And he wrote back saying, "Certainly, absolutely. Good luck with your work."

*Jennifer Stock:* That's wonderful. Well, thank you for sharing it with us today on KWMR. So, we were talking about teaspoons on sand and tipping that bucket, and there's a piece in the book you write about tuna, and it's in Indonesia?

*Liz Cunningham:* No, actually it's in Europe, and here's the thing, it's just an extra glass of wine at night and you can talk philosophy, and you can talk about the toothpicks, and the fulcrum, and the bucket of sand, and all that, and you're like, "So what? Does it really matter how I think about the world, does it change anything, or is this just a lot of nice talk?" Well, one of the interesting things is I planned to go to the Mediterranean to write about blue fin tuna, because I wanted to write about mass extinction, and here was this fish that was destined to become extinct, the blue fin tuna, and all the indicators said it was going to become extinct, and I said, "Great, this is

perfect for me.” I’m a journalist, so sometimes something awful is good.

So I had a plan, I was going to go write about mass extinction. Well, by the time I wanted to write about it and the time I got to interview Sergi Tudela, who’s head of the World Wildlife Fisheries Program, during that time something happened—All of a sudden the blue fin tuna populations started to pop back up. And everyone is like, “No! This is too good!” This was the most hopeless fishery, probably the most doomed fish, you have a five hundred pound fish that sells for seven thousand dollars on the Japanese market, with the mafia involved, with all this money involved it’s just the most difficult fishery, I would say the most intransigent fishery. So I interviewed Sergi Tudela and said, “What happened?” And the first thing he said was, “We didn’t quit.” And then he started making lists, and it was the teaspoons and the buckets, and he said, it was the landing size, we raised it, we lowered the quotas, we changed the open season, we had a public awareness campaign, we went to chefs and fishmonger and restaurants and we had public demonstrations, and all of a sudden you went, “Oh. My. God. It was all the teaspoons.”

*Jennifer Stock:* That’s exciting.

*Liz Cunningham:* Yes, and you know we don’t know where blue fin’s story is going to go, it may never get back to the levels they’d been at, but it’s a situation where you have the most hopeless environmental situation that fully turns around.

*Jennifer Stock:* Amazing, actually, that’s really amazing. I was just thinking about Luohan, which is a doomed fishery, so it’s nice to hear there are some positive stories, I’m not too up on blue fins. That’s good to know.

Well we have about, just six or seven minutes left, and one of my favorite passages, just because we spoke about it, was a trip you just took in the last year, to the Dominican Republic, to see humpback whales and calves, up close, which we don’t do here in the US, because of the Marine Mammal Protection Act, but I know they take quite the stewardship approach with this specific site.

Liz Cunningham: Yes, they do.

Jennifer Stock: So tell us—why did you go to this site, was this a conservation question you wanted to learn about? Or was it more an experience?

Liz Cunningham: Well, there were all kinds of arrows pointing me there, and I think the biggest one was that there is no relation between an aquatic creature and mankind that's so set in relief than the relationship of the sea to civilization, I mean the slaughter of the sea mammals goes all the way back to Babylonian times, and I think there a famous god, Marduk, who slaughters the sea monster Tiamat, and it goes way, way back into the psyche of civilization.

I also felt, and had heard, that there were experiences of great awe and beauty with whales that are really remarkable, so I was very interested myself. But I would say, that reason, and then one more, which is that humpback whales are a real sign of success, because they were almost driven to extinction, and that was also another bucket of sand moment. Where all the different demonstrations, the lobbying, the legislation, the awareness raising, added up.

Jennifer Stock: Well, let's read the passage.

Liz Cunningham: So, to preface this a little bit, one of the things that was so unique when we were on the boat, is that there were couples there that had kids with them, so that was very special, and I think that when I was on the boat, I was still struggling with how I was really going to meet these challenges, and something happened underwater that really made me see how I was going to do that, because I myself still felt very overwhelmed by the powers that be and how you're going to match that. So this is when we're going to go out and really swim with these whales.

*"The mother and calf surface once more, exhaled with a muffled burst and descended, like a submarine and its companion submersible. We slipped into the water. The mother was resting motionless at about 60 feet, and the calf had nuzzled herself right between her chin, with the sleepy eyed, soft mouthed expressing of a baby in a cradle. The water was suffused with peacefulness and*

*some unthinkable energy, which I was at a loss to name. Every few minutes the calf stirred and rose, as if swimming in its sleep, outstretching its newborn fins in slow motion, to propel itself to the surface to take a breath. Then it sank down, as if tip toeing back to bed, as if in a trancelike slumber, and tucked itself back under its mother's chin.*

*We floated like a loose knit blob of jellyfish, gawking silently, there was just an hour or so of daylight left and the light cast angular, silvery threads through the darkening, violet-blue water. Once again the calf raised its head and slipped out from under its mother's chin, but this time it seemed to wake out of its slumber. As it rose it turned vertically in the water, revealing the soft looking pleats beneath its throat and belly. "When a whale turns its belly towards you," Gina told us, "it's actually positioning its eyes so it can see you best."*

*The calf spread its fins like wings, took a breath of air, and began to swim horizontally, bobbing slowly just below the surface. The mother started to rise, moving steady, like a slow moving barge. Soon their heads were just a few feet away. The calf wobbled in the sea surge playfully, its fins spread like the wings of a fledgling sparrow. Right behind it was the mother's head, her eye big as an apple, was filled with steady confidence and warmth,*

*'Bury me here,' I mused, "when I die, bring my ashes to a place like this and scatter them." My God, I had never thought anything like that before! What had me by the throat?*

*It was so clear I hadn't seen it before. That energy, that unthinkable energy that I was at a loss to name, it was power. Unthinkably massive power, married to kindness, 40 tons of constant, steadfast, attentive, care. Mumsie could break our necks with one of her casual flicks of one of her fins. Our boat half her size certainly wouldn't survive a breach on top of it. But what was she doing? Gently approaching, careful that her fins might not hit anyone, slowly, as if not to startle us.*

*Soon she would migrate north, navigate threats of ship strikes and fishing net entanglement, and orcas attacking her calf. But despite*



*all the changes in the sea, which we have wrought, she would guide her calf north, she would forge on ahead.*

*Eva swam up beside me, we held hands as the whales nudged closer still, I felt Eva's soft, tiny hand in mine, wove my fingers into her small squirming fingers and squeezed. 'Bring out the best in me, kiddo,' I thought. Bring out the best in me.*

*The calf turned slowly, as if on a spindle, and eyed us with a wink; the pleats on its belly were unscarred and smooth, like the porcelain skin of a newborn baby. The mother calmly looked on, our search was over, they were finding us now.*

*Jennifer Stock:* (Giggles) It just gives me tingles thinking about that experience. I've never seen something so large underwater.

*Liz Cunningham:* Yeah, yeah.

*Jennifer Stock:* And you were experiencing this with a young girl?

*Liz Cunningham:* Yeah. You know there were these kids on the boat, and the first thing we noticed is we're all on good behavior, we're all behaving better than usual, and we were at our best. And so when I got under water and she just happened to swim up next to me, I just realized that's what this all is going to be about. There are no formulas, just do your best.

*Jennifer Stock:* Just do your best. That's wonderful. Thank you for sharing that passage, it's beautiful. All of it is wonderful and I can't wait to read the whole book, when it's all together and you're out on the road doing some tours and stuff.

We just have another minute, are there ways that people can contact you?

*Liz Cunningham:* Yes, if you Google me, Liz Cunningham, my site will come up, and there's a really nice little field that you can enter your email address in, and then I will do quarterly updates on the book. And you'll also see some blog entries and some links to excerpts of the book that have already been published.

*Jennifer Stock:* Right, and some things we haven't read here today, so that's great.  
[www.lizcunningham.net](http://www.lizcunningham.net)

Thank you so much Liz for coming in today, it was such a pleasure having you in the studio.

*Liz Cunningham:* Great to be here with you, Jenny.

*Jennifer Stock:* We're going to take a quick break here, and when we get back we'll get a local ocean update. Just like Liz was seeing whales under water, there're whales around here, so we're going to hear about what's going on in the ocean around here. Stay with us.

*(Musical interlude)*

*Jennifer Stock:* And you're listening to Ocean Currents on KWMR, my name is Jennifer Stock and you've just been listening to an interview here with Liz Cunningham, and author talking about her upcoming book, Ocean Country. But we're now going to shift gears and get a live update from what's been happening on the ocean offshore, and I'd like to welcome Jaime Jahnke, you're live on the air!

*Jaime Jahnke:* Hello Jenny, thank you for the invitation today.

*Jennifer Stock:* Thank you! Jaime is visiting us from Point Blue Conservation Science in Petaluma, formerly known as PRBO. Jaime, give us a little bit of a background, what were the surveys you were doing offshore of Point Reyes?

*Jaime Jahnke:* Over the last several years, in 2004, we have been working together with, PRBO in Point Blue and the National Marine Sanctuaries, both Cordell Bank and Gulf of the Farallones, to go out and survey the distribution and abundance of whales and birds, and their food during the summer. And we held three to five cruises, and use that information to help you guys manage the management of your area.

*Jennifer Stock:* Management of the area. Wonderful. SO you just had a cruise that ended a week and a half ago, and just keeping in touch through

facebook, it looks like you had wonderful sea conditions, which probably helped some visibility, what were the highlights of the week?

*Jaime Jahnke:* I would say we had a great cruise, the weather was almost placid for most of the days, it was so placid that we were able to see a leather-backed turtle on the first day, we saw several sharks, I'm right near the surface of the water, some of them very close to the boat, and we had some encounters with killer whales and least two times on the first day. And we had some humpback whales that came very, very close,

*Jennifer Stock:* That's so exciting. So I take it when the whales approach you kind of have to stop for the day, does that slow you down a bit?

*Jaime Jahnke:* Yes, on two different occasions the whale came right up to the boat, and basically we had to stop the engines and wait for them to leave. They were circling us for about 40 minutes. I don't think they were really feeding, I think they were just curious, one time it looked like one of them was scratching on the boat, and we were, "come on."

*Jennifer Stock:* Wow, that's cool. This information is being used with regional management and recently I know that you've been involved with the sanctuaries and the coast guard, the relocation of the shipping lanes, and now kind of monitoring where the whales are, in relation to the shipping lanes. Can you tell us about the new digital app that's been released to gather information?

*Jaime Jahnke:* There is a group called Conserve.io that put together an iPhone app that anybody can use and download on their phones, that allows them to log where they are when they see a whale in the water, on a whale watching tour, or out fishing, if you see a whale you log it into your app and that information goes into the server on the east coast and Conserve.io is able to log in and harvest that information and summarize it and make it a viable truth so you can access where the whales are when you are there. And over time manage those areas.

- Jennifer Stock:* If there's a lot of whales in the shipping lanes, especially endangered ones, there might be a notice to mariners requesting a slow down or rerouting requesting to take another lane.
- Jaime Jahnke:* That is correct, so so far the presence in the number of whales near the shipping lanes have led to a notice to mariners to ask industries to be cautious when coming into the San Francisco Bay Area, and to look for animals and be cautious. Over time there will be other types of requests, such as requesting the use of another lane, if needed.
- Jennifer Stock:* So it's important that all this information be gathered, and this is a perfect example with endangered species in this protected area, this is a great use of science to really help with the management and trying to conserve these with the overlap of uses within these waters. What else is happening out in the ocean? Are the productivity, meaning the krill and the fish in the water, pretty good still? I imagine it is, seeing as the salmon is off the charts!
- Jaime Jahnke:* Yeah, so when we went up into Bodega after working in the day, and we were up there trying to find a docking space for the night, we found that all the docking spaces were filled because there were so many fishermen working out there. It's a productive year, and there's a lot of recreational fishermen fishing out of the San Francisco Bay Area and the Bodega Bay Area. For us, we saw lots of humpback whales, not many blue whales. We saw lots of birds, which are, by the way, doing really well in the Farallone Islands. However, when we used our nets to sample the amount of food for whales and birds that is in the water, we found that there is not as much as were found in 2010 and 2011, we had krill in our findings, but mostly we had, what would be called, gelatinous zooplankton, which is very reflective to the fish finders we use on the boat, but is not a great food for whales and birds.
- Jennifer Stock:* Interesting, well you go out again in September, right? So it is interesting to see what the differences will be in the water then.
- Jaime Jahnke:* Yes, so we have another cruise planned for the third week of September, and we are looking forward to it. July and September

always seem to be good numbers when looking at whales out here in the sanctuaries.

*Jennifer Stock:* Wonderful, well Jaime, thanks so much for calling in to give us a quick update about what Access is up to. Is there a website you'd like to have people check out if they'd like to learn more about Access program, or see pictures from your cruises?

*Jaime Jahnke:* Yes, one can find us two ways, they can find us on the web, just go to [www.accessoceans.org](http://www.accessoceans.org) or they can look for us on facebook at access partnership.

*Jennifer Stock:* Accessoceans.org, and Access Partnership on facebook. Wonderful, and I will just tell listeners the photos are great, they just brought me into the cruise, because I was so excited for you guys. (Laughs)

*Jaime Jahnke:* Thank you, we had a great time.

*Jennifer Stock:* Well thanks again, Jaime, for giving a call in and we'll talk to you soon.

*Jaime Jahnke:* All right, thank you for the invitation.

*Jennifer Stock:* Take care.

That was Jaime Jahnke from Point Blue Ocean Science in Petaluma, and a partner to Gulf of the Farallones, and Cordell Bank Sanctuaries, working on surveying the oceans offshore, to understand the conditions, the food web, and how the whales and the seabirds are responding to that. And also they're starting to track other things, like ocean acidification. So, a very important partnership helping to conserve these resources.

We are close to the end of the show and I want to just say thanks for tuning in today to Ocean Currents. Ocean Currents is the first Monday of every month, and it's part of the West Marin Matter

series, where you can tune in every Monday at one to learn about a topic of environmental focus, either locally or globally. Ocean Currents has a podcast, you can go to iTunes, and search for Ocean Currents, or you can go to [www.cordellbank.noaa.gov](http://www.cordellbank.noaa.gov) to get all the past episodes.

Two other things I'd like to let you know about, first of all, the photo exhibit we have up at the Point Reyes Library, there's a photo exhibit of images of Cordell Bank both seabirds and mammals and underwater reef stuff, that's going to stay up a little bit longer so if you haven't had a chance to check it out, please, go over there, there are some beautiful images up. Check the Point Reyes Library for the hours, and it's up for probably a couple more weeks. I'll wait for the phone call when it needs to come down, but it's up there right now.

And also this Thursday is an advisory sanctuary council meeting, at the Cordell Bank National Marine Sanctuary, and that is also at Point Blue Conservation Science headquarters in Petaluma, and I believe it starts at 9:30, and you can get the details and the agenda at [www.cordellbank.noaa.gov](http://www.cordellbank.noaa.gov) to hear what the council will be meeting about.

So thanks again for tuning into Ocean Currents have a great time, make sure to get out, go for a swim, look for whales, go to the beach, and have fun!

(Outro)

Thank you for listening to Ocean Currents. This show is brought to you by NOAA's Cordell Bank National Marine Sanctuary, on West Marin community radio, KWMR. Views expressed by guests on this program may or may not be that of the national Oceanic and Atmospheric Administration, and are meant to be educational in nature. To learn more about Cordell Bank National Marine Sanctuary go to [www.cordellbank.noaa.gov](http://www.cordellbank.noaa.gov)